

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P239024

Luminaire Tested: **24ENA-LD2-58-UNV-L950-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P239024  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1708-234-34)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24ENA-LD2-58-UNV-L950-CD1-U  
Description: METALUX ENCOUNTER 2X4 LED TROFFER  
AIR-VENTED OPTION  
Light Source: (308)5000K CCT, 90 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5433.5 lumens  
Efficiency: N/A  
Efficacy: 115.6 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.29 / 1.4  
Luminous Opening: Rectangular (W 1.67' x L: 3.83' x H: 0')  
CIE Type: Direct

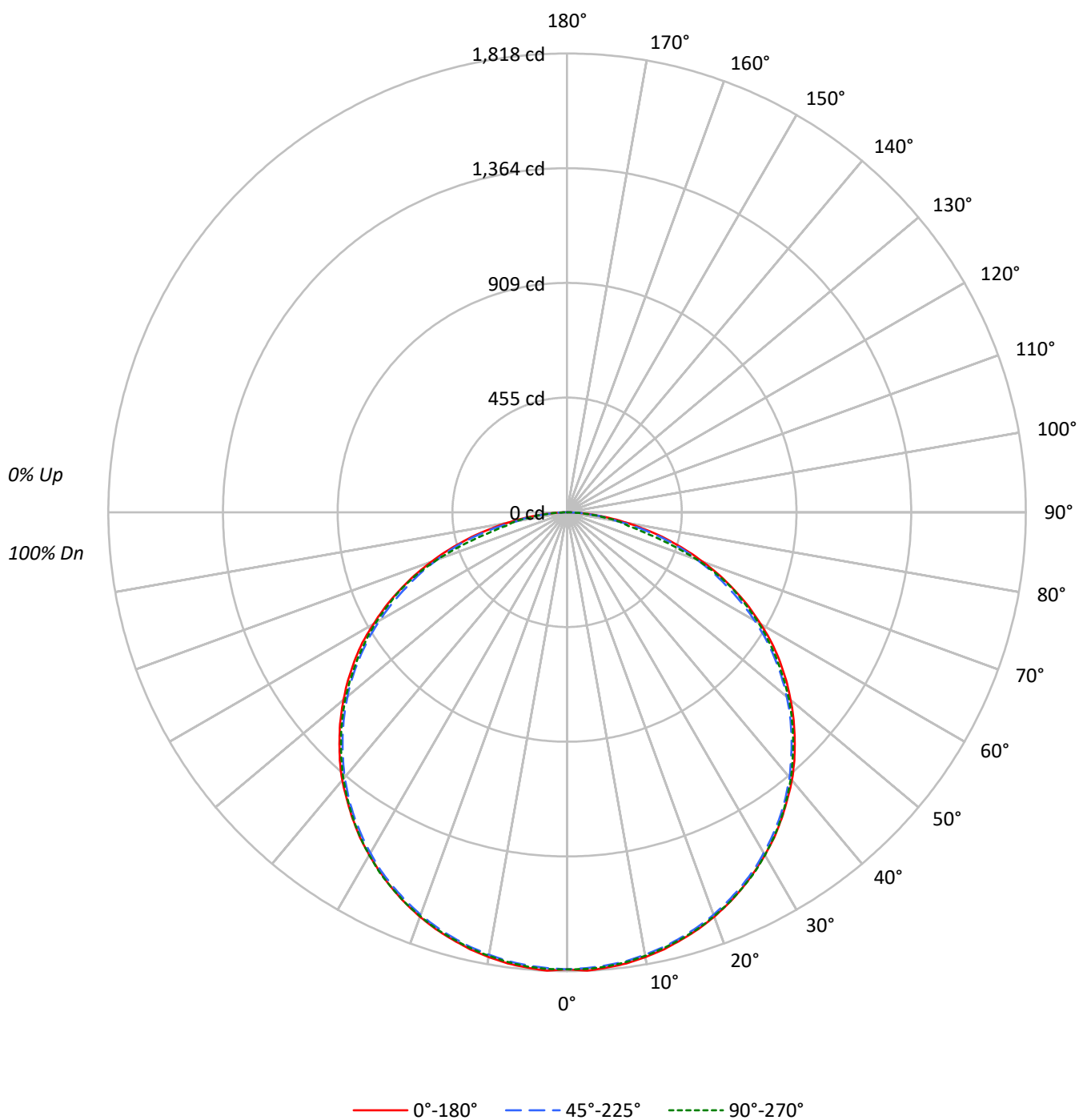
Input Watts (W): 47  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |  |     |     |     |  |  |     |     |     |  |  |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|--|--|-----|-----|-----|--|--|-----|
| RF  | 20  |     |     |     | 20  |     |     |     |  | 20  |     |     |  |  | 20  |     |     |  |  | 20  |
| RC  | 80  |     |     |     | 70  |     |     |     |  | 50  |     |     |  |  | 30  |     |     |  |  | 10  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  |  | 50  | 30  | 10  |  |  | 50  | 30  | 10  |  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |  |     |     |     |  |  |     |     |     |  |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  |  | 106 | 106 | 106 |  |  | 102 |
| 1   | 109 | 104 | 99  | 95  | 106 | 101 | 97  | 94  |  | 97  | 94  | 91  |  |  | 93  | 90  | 88  |  |  | 90  |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 82  | 76  |  | 84  | 79  | 74  |  |  | 81  | 77  | 73  |  |  | 78  |
| 3   | 90  | 79  | 70  | 64  | 87  | 77  | 69  | 63  |  | 74  | 67  | 62  |  |  | 71  | 66  | 61  |  |  | 69  |
| 4   | 82  | 70  | 61  | 54  | 79  | 68  | 60  | 53  |  | 66  | 58  | 53  |  |  | 63  | 57  | 52  |  |  | 61  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 52  | 46  |  | 59  | 51  | 45  |  |  | 57  | 50  | 45  |  |  | 55  |
| 6   | 69  | 56  | 47  | 40  | 67  | 55  | 46  | 40  |  | 53  | 45  | 40  |  |  | 51  | 44  | 39  |  |  | 50  |
| 7   | 64  | 50  | 42  | 35  | 62  | 50  | 41  | 35  |  | 48  | 40  | 35  |  |  | 47  | 40  | 35  |  |  | 45  |
| 8   | 60  | 46  | 37  | 31  | 58  | 45  | 37  | 31  |  | 44  | 36  | 31  |  |  | 43  | 36  | 31  |  |  | 41  |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  |  | 40  | 33  | 28  |  |  | 39  | 33  | 28  |  |  | 38  |
| 10  | 52  | 39  | 31  | 26  | 51  | 38  | 31  | 25  |  | 37  | 30  | 25  |  |  | 36  | 30  | 25  |  |  | 35  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3051 | 3051 | 3051 |
| 5°  | 3062 | 3047 | 3055 |
| 10° | 3061 | 3045 | 3053 |
| 15° | 3057 | 3043 | 3052 |
| 20° | 3057 | 3043 | 3053 |
| 25° | 3054 | 3039 | 3054 |
| 30° | 3050 | 3032 | 3050 |
| 35° | 3047 | 3026 | 3043 |
| 40° | 3049 | 3016 | 3034 |
| 45° | 3040 | 2997 | 3019 |
| 50° | 3032 | 2979 | 3005 |
| 55° | 3021 | 2948 | 2978 |
| 60° | 2984 | 2892 | 2953 |
| 65° | 2924 | 2801 | 2905 |
| 70° | 2819 | 2701 | 2695 |
| 75° | 2653 | 2535 | 2143 |
| 80° | 2335 | 1982 | 2037 |
| 85° | 1844 | 1734 | 1603 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 171.5  | 3.2       |
| 10°-20°   | 493.3  | 9.1       |
| 20°-30°   | 754.8  | 13.9      |
| 30°-40°   | 922.6  | 17.0      |
| 40°-50°   | 974.9  | 17.9      |
| 50°-60°   | 903.3  | 16.6      |
| 60°-70°   | 707.7  | 13.0      |
| 70°-80°   | 400.1  | 7.4       |
| 80°-90°   | 105.3  | 1.9       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 1419.6 | 26.1      |
| 0°-40°    | 2342.1 | 43.1      |
| 0°-60°    | 4220.3 | 77.7      |
| 0°-90°    | 5433.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5433.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1811 | 1811  | 1811 | 1811  | 1811 |      |
| 5°  | 1811 | 1805  | 1802 | 1800  | 1806 | 172  |
| 15° | 1753 | 1746  | 1745 | 1744  | 1750 | 495  |
| 25° | 1643 | 1636  | 1635 | 1635  | 1643 | 757  |
| 35° | 1482 | 1475  | 1471 | 1471  | 1479 | 928  |
| 45° | 1276 | 1267  | 1258 | 1258  | 1267 | 985  |
| 55° | 1029 | 1017  | 1004 | 1006  | 1014 | 919  |
| 65° | 733  | 720   | 703  | 712   | 729  | 725  |
| 75° | 408  | 396   | 389  | 347   | 329  | 429  |
| 85° | 95   | 90    | 90   | 85    | 83   | 112  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1810.8 | 1810.8 | 1810.8 | 1810.8 | 1810.8 |
| 2.5°  | 1817.6 | 1809.6 | 1807.3 | 1805.1 | 1810.8 |
| 5°    | 1810.8 | 1805.1 | 1801.7 | 1800.5 | 1806.2 |
| 7.5°  | 1802.8 | 1796.0 | 1793.7 | 1791.5 | 1797.1 |
| 10°   | 1789.2 | 1782.4 | 1780.1 | 1779.0 | 1784.6 |
| 12.5° | 1773.3 | 1765.3 | 1764.2 | 1763.1 | 1768.8 |
| 15°   | 1752.9 | 1746.0 | 1744.9 | 1743.8 | 1749.5 |
| 17.5° | 1731.3 | 1724.5 | 1722.2 | 1721.1 | 1729.0 |
| 20°   | 1705.2 | 1698.4 | 1697.2 | 1696.1 | 1702.9 |
| 22.5° | 1675.7 | 1668.8 | 1666.6 | 1667.7 | 1674.5 |
| 25°   | 1642.7 | 1635.9 | 1634.8 | 1634.8 | 1642.7 |
| 27.5° | 1606.4 | 1599.6 | 1599.6 | 1599.6 | 1608.7 |
| 30°   | 1567.8 | 1562.1 | 1558.7 | 1559.9 | 1567.8 |
| 32.5° | 1528.1 | 1519.0 | 1516.7 | 1517.9 | 1525.8 |
| 35°   | 1481.5 | 1474.7 | 1471.3 | 1471.3 | 1479.3 |
| 37.5° | 1433.8 | 1427.0 | 1422.5 | 1422.5 | 1430.4 |
| 40°   | 1386.2 | 1375.9 | 1371.4 | 1369.1 | 1379.4 |
| 42.5° | 1332.8 | 1324.9 | 1314.6 | 1314.6 | 1323.7 |
| 45°   | 1276.0 | 1267.0 | 1257.9 | 1257.9 | 1267.0 |
| 47.5° | 1218.1 | 1209.1 | 1198.8 | 1198.8 | 1207.9 |
| 50°   | 1156.8 | 1147.8 | 1136.4 | 1136.4 | 1146.6 |
| 52.5° | 1094.4 | 1084.2 | 1071.7 | 1070.6 | 1080.8 |
| 55°   | 1028.6 | 1017.2 | 1003.6 | 1005.8 | 1013.8 |
| 57.5° | 961.6  | 946.8  | 933.2  | 933.2  | 945.7  |
| 60°   | 885.5  | 873.0  | 858.3  | 860.5  | 876.4  |
| 62.5° | 812.9  | 797.0  | 782.2  | 787.9  | 801.5  |
| 65°   | 733.4  | 719.8  | 702.7  | 711.8  | 728.8  |
| 67.5° | 655.1  | 640.3  | 626.7  | 638.0  | 646.0  |
| 70°   | 572.2  | 558.6  | 548.3  | 548.3  | 547.2  |
| 72.5° | 489.3  | 476.8  | 474.5  | 453.0  | 439.3  |
| 75°   | 407.6  | 396.2  | 389.4  | 347.4  | 329.2  |
| 77.5° | 322.4  | 319.0  | 297.4  | 253.2  | 247.5  |
| 80°   | 240.7  | 242.9  | 204.3  | 205.5  | 210.0  |
| 82.5° | 165.7  | 162.3  | 153.3  | 146.4  | 144.2  |
| 85°   | 95.4   | 89.7   | 89.7   | 85.1   | 82.9   |
| 87.5° | 31.8   | 35.2   | 35.2   | 35.2   | 36.3   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)